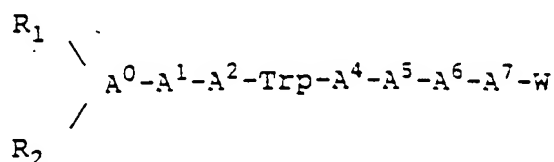


1. A therapeutic peptide comprising between seven and ten amino acid residues, inclusive, said peptide being an analog of one of the following naturally occurring peptides terminating at the carboxy-terminus with a Met residue: (a) litorin; (b) the ten amino acid carboxy-terminal region of mammalian gastrin releasing peptide; and (c) the ten amino acid carboxy-terminal region of amphibian bombesin; said therapeutic peptide being of the formula:



wherein

- A^0 = Gly, Nle, α -aminobutyric acid, or the D-isomer of any of Ala, Val, Gln, Asn, Leu, Ile, Met, p-X-Phe (where X = F, Cl, Br, NO_2 , OH, H or CH_3), Trp, Cys, or β -Nal, or is deleted;
- A^1 = the D or L-isomer of any of pGlu, Nle, or α -aminobutyric acid, or the D-isomer of any of Ala, Val, Gln, Asn, Leu, Ile, Met, p-X-Phe (where X = F, Cl, Br, NO_2 , OH, H or CH_3), F_5 -Phe, Trp, Cys, or β -Nal, or is deleted;
- A^2 = pGlu, Gly, Ala, Val, Gln, Asn, Leu, Ile, Met, p-X-Phe (where X = F, Cl, Br, NO_2 , OH, H or CH_3), Trp, Cys, β -Nal, His, 1-methyl-His, or 3-methyl-His;
- A^4 = Ala, Val, Gln, Asn, Gly, Leu, Ile, Nle, α -aminobutyric acid, Met, p-X-Phe (where X = F, Cl, Br, NO_2 , OH, H or CH_3), Trp, Cys, or β -Nal;

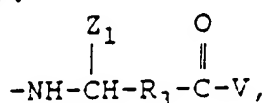
A^5 = Gln, Asn, Gly, Ala, Leu, Ile, Nle, α -aminobutyric acid, Met, Val, p-X-Phe (where X = F, Cl, Br, OH, H or CH_3), Trp, Thr, or β -Nal;

A^6 = Sar, Gly, or the D-isomer of any of Ala, N-methyl-Ala, Val, Gln, Asn, Leu, Ile, Met, p-X-Phe (where X = F, Cl, Br, NO_2 , OH, H or CH_3), Trp, Cys, or β -Nal;

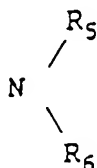
A^7 = 1-methyl-His, 3-methyl-His, or His;

provided that, if A^0 is present, A^1 cannot be pGlu; further provided that, if A^0 or A^1 is present, A^2 cannot be pGlu; further provided that, when A^0 is deleted and A^1 is pGlu, R_1 must be H and R_2 must be the portion of Glu that forms the imine ring in pGlu; and further provided that, W can be any one of the following:

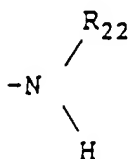
(I):



wherein R_3 is $CHR_{20}-(CH_2)_{n1}$ (where R_{20} is either of H or OH; and $n1$ is either of 1 or 0), or is deleted, and Z_1 is the identifying group of any of the amino acids Gly, Ala, Val, Leu, Ile, Ser, Asp, Asn, Glu, Gln, p-X-Phe (where X = H, F, Cl, Br, NO_2 , OH, or CH_3), F_5 -Phe, Trp, Cys, Met, Pro, HyPro, cyclohexyl-Ala, or β -nal; and V is either OR_4 , or

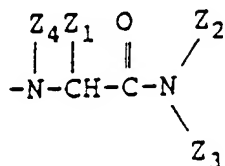


where R_4 is any of C_{1-20} alkyl, C_{3-20} alkenyl, C_{3-20} alkynyl, phenyl, naphthyl, or C_{7-10} phenylalkyl, and each R_5 , and R_6 , independently, is any of H, C_{1-12} alkyl, C_{7-10} phenylalkyl, lower acyl, or,



where R_{22} is any of H, C_{1-12} alkyl, C_{7-10} phenylalkyl, or lower acyl; provided that, when one of R_5 or R_6 is $-NHR_{22}$, the other is H;

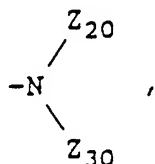
(II):



wherein Z_1 is the identifying group of any one of the amino acids Gly, Ala, Val, Leu, Ile, Ser, Asp, Asn, Glu, β -Nal, Gln, p-X-Phe

(where X = H, F, Cl, Br, NO₂, OH or CH₃), F₅-Phe, Trp, Cys, Met, Pro, or HyPro; and each Z₂, Z₃, and Z₄, independently, is H, lower alkyl, lower phenylalkyl, or lower naphthylalkyl; or

(III):



wherein each Z₂₀ and Z₃₀, independently, is H, lower alkyl, lower phenylalkyl, lower naphthylalkyl; further provided that, when either of Z₂₀ or Z₃₀ is other than H, A⁷ is His, A⁶ is Gly, A⁵ is Val, A⁴ is Ala, A² is His, and either of R₁ or R₂ is other than H, A¹ must be other than deleted; further provided that, for the formulas (I) through (III), any asymmetric carbon atom can be R, S or a racemic mixture; and further provided that each R₁ and R₂, independently, is H, C₁₋₁₂ alkyl, C₇₋₁₀ phenylalkyl, COE₁ (where E₁ is C₁₋₂₀ alkyl, C₃₋₂₀ alkenyl, C₃₋₂₀ alkynyl, phenyl, naphthyl, or C₇₋₁₀ phenylalkyl), or lower acyl, and R₁ and R₂ are bonded to the N-terminal amino acid of said peptide, and further provided that when one of R₁ or R₂ is COE₁, the other must be H, or a pharmaceutically acceptable salt thereof.

2. The therapeutic peptide of claim 1 wherein

A^0 = Gly, D-Phe, or is deleted;

A^1 = p-Glu, D-Phe, D-Ala, D- β -Nal, D-Cpa, or D-Asn;

A^2 = Gln, His, 1-methyl-His, or 3-methyl-His;

A^4 = Ala;

A^5 = Val;

A^6 = Sar, Gly, D-Phe, or D-Ala;

A^7 = His;

and, where W is (I) and R_3 is CH_2 or CH_2-CH_2 , Z_1 is the identifying group of Leu or Phe, where W is (I) and R_3 is $CHOH-CH_2$, Z_1 is the identifying group of Leu, cyclohexyl-Ala, or Phe and each R_5 and R_6 is H; and where W is (I), V is NHR_6 , and R_6 is NH_2 ; where W is (II), Z_1 is the identifying group of any one of the amino acids Leu or p-X-Phe (where X = H, F, Cl, Br, NO_2 , OH or CH_3); and each Z_2 , Z_3 and Z_4 , independently, is H, lower alkyl, lower phenylalkyl, or lower naphthylalkyl; and where W is (III), each Z_{20} and Z_{30} , is H; and each R_1 and R_2 , independently, is H, lower alkyl, or lower acyl.

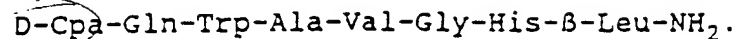
3. The therapeutic peptide of claim 2 of the formula:

D-Phe-Gln-Trp-Ala-Val-Gly-His-Leu-ethylamide.

4. The therapeutic peptide of claim 2 of the formula:

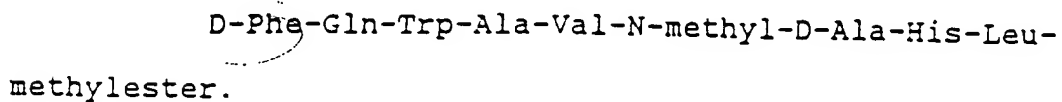
p-Glu-Gln-Trp-Ala-Val-Gly-His-statine-amide.

5. The therapeutic peptide of claim 2 of the formula:



6. The peptide of claim 1 wherein W is (I), V is OR₄, and R₄ is any of C₁₋₂₀ alkyl, C₃₋₂₀ alkenyl, C₃₋₂₀ alkynyl, phenyl, naphthyl, or C₇₋₁₀ phenylalkyl, and A⁶ is N-methyl-D-Ala or A¹ is D-F₅-Phe.

7. The therapeutic peptide of claim 6 of the formula:



8. The therapeutic peptide of claim 2 of the formula:

